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(56) Documents cited  
 GB 0402059 US 3871607

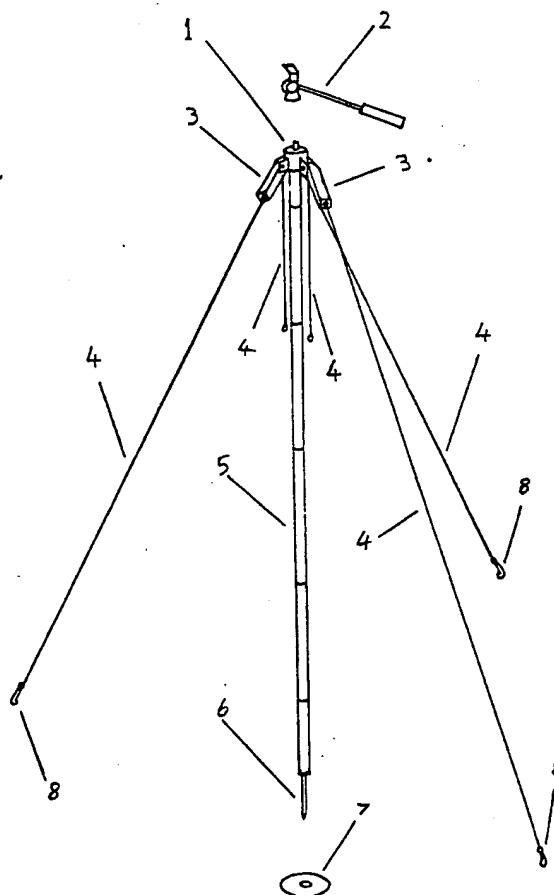
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 A4H  
 G2J  
 Selected US specifications from IPC sub-class  
 F16M

(54) Camera mast

(57) A lightweight, portable camera support consisting of a head 1 capable of accepting a pan and tilt or ball and socket head 2 and a sectional centre column 5 supported by three or more independently tensionable guy lines 4 which may be attached to a variety of ground anchors.

Whilst being primarily intended for use on natural surfaces the camera mast could be provided with a base arrangement which would make it suitable for use on artificial surfaces such as concrete without the need for ground anchors.

FIG 1

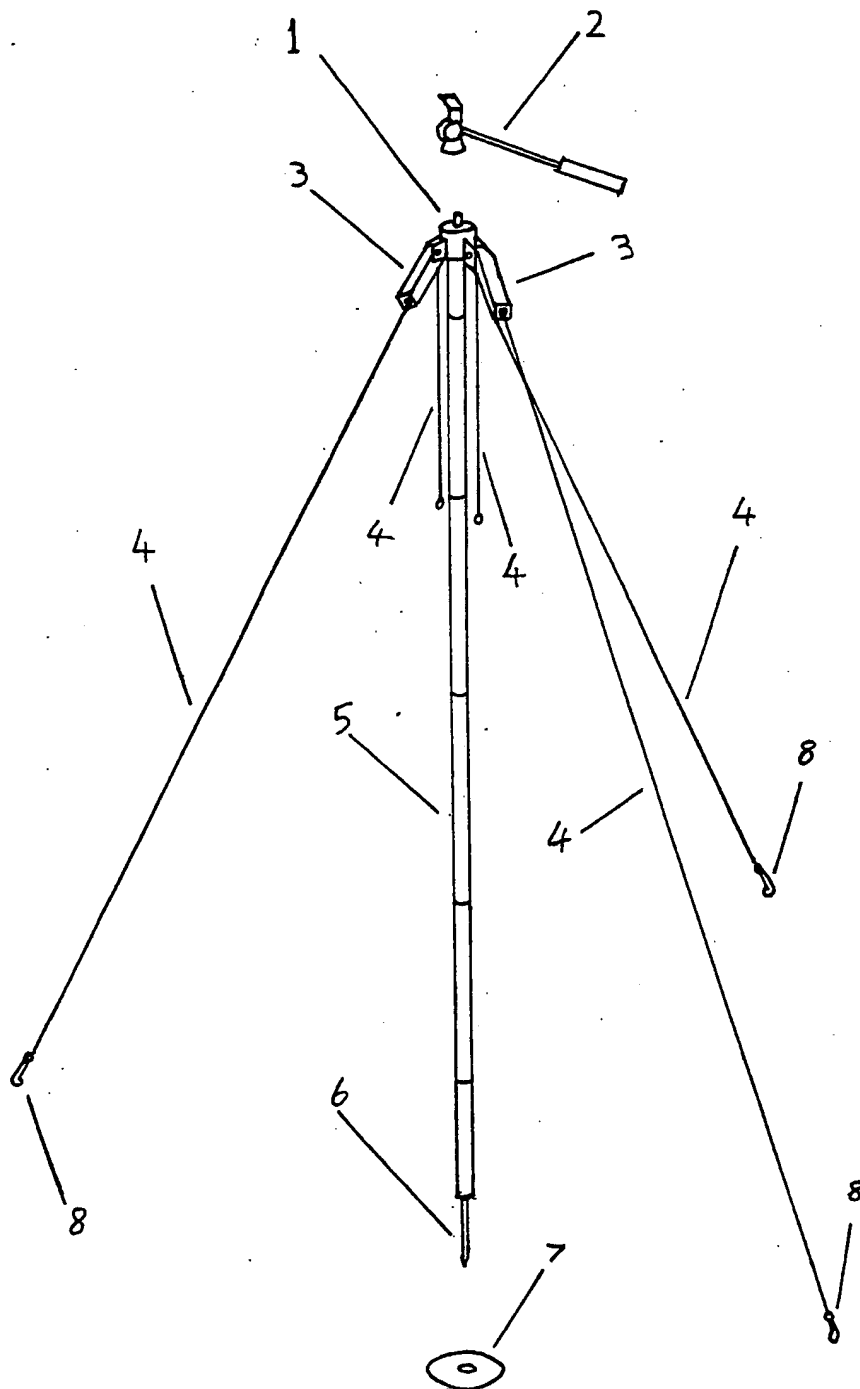


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FIG 1



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FIG 2

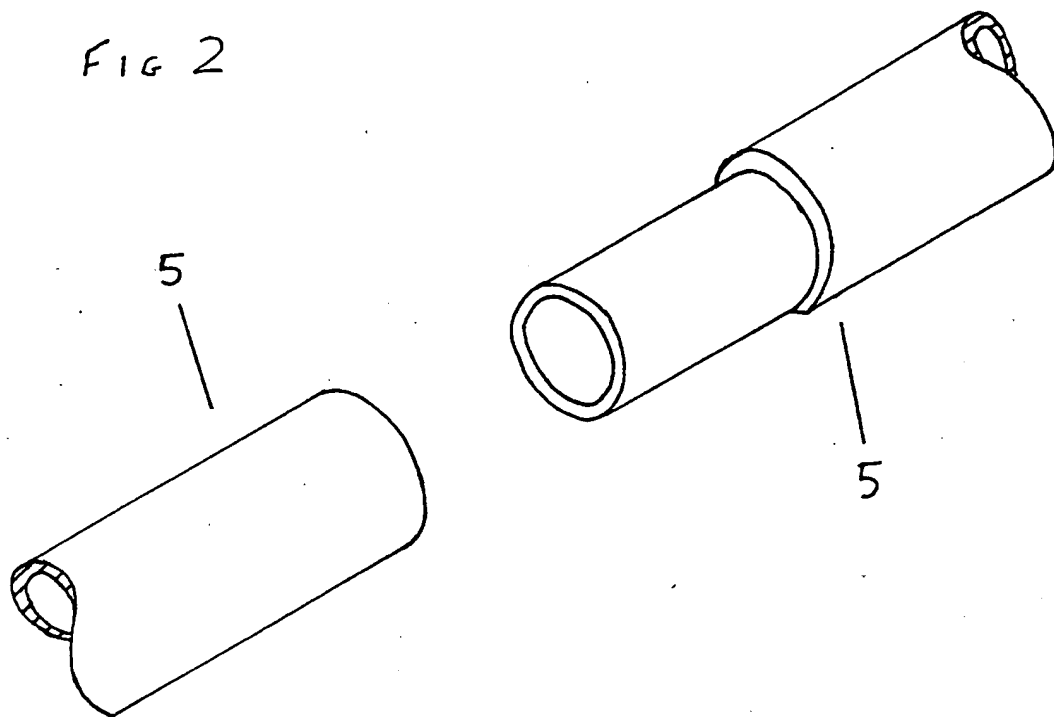
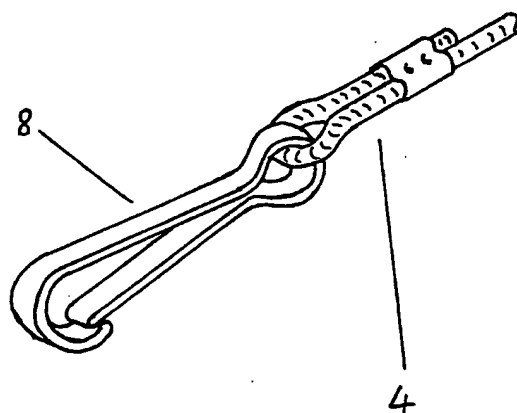
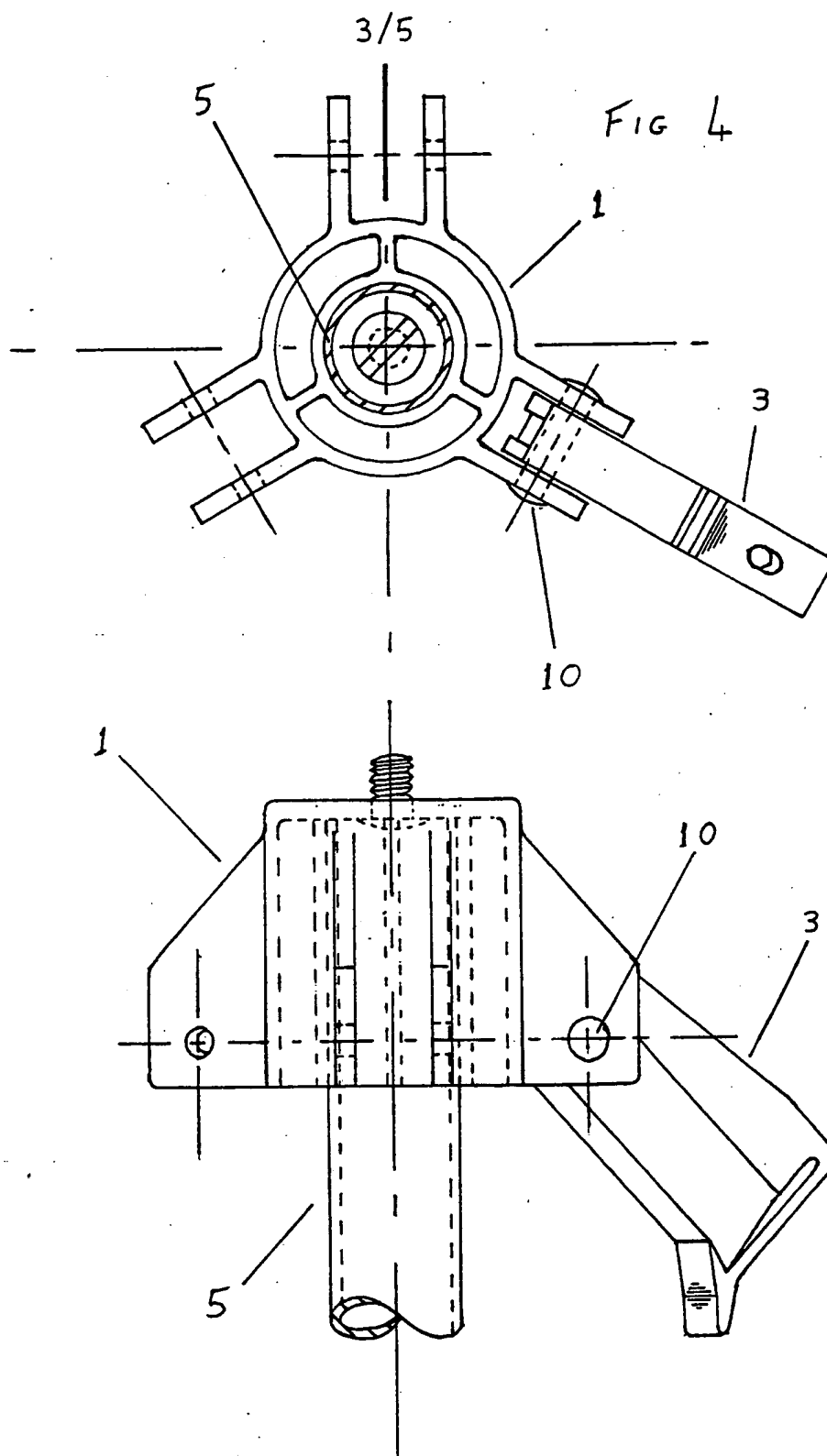
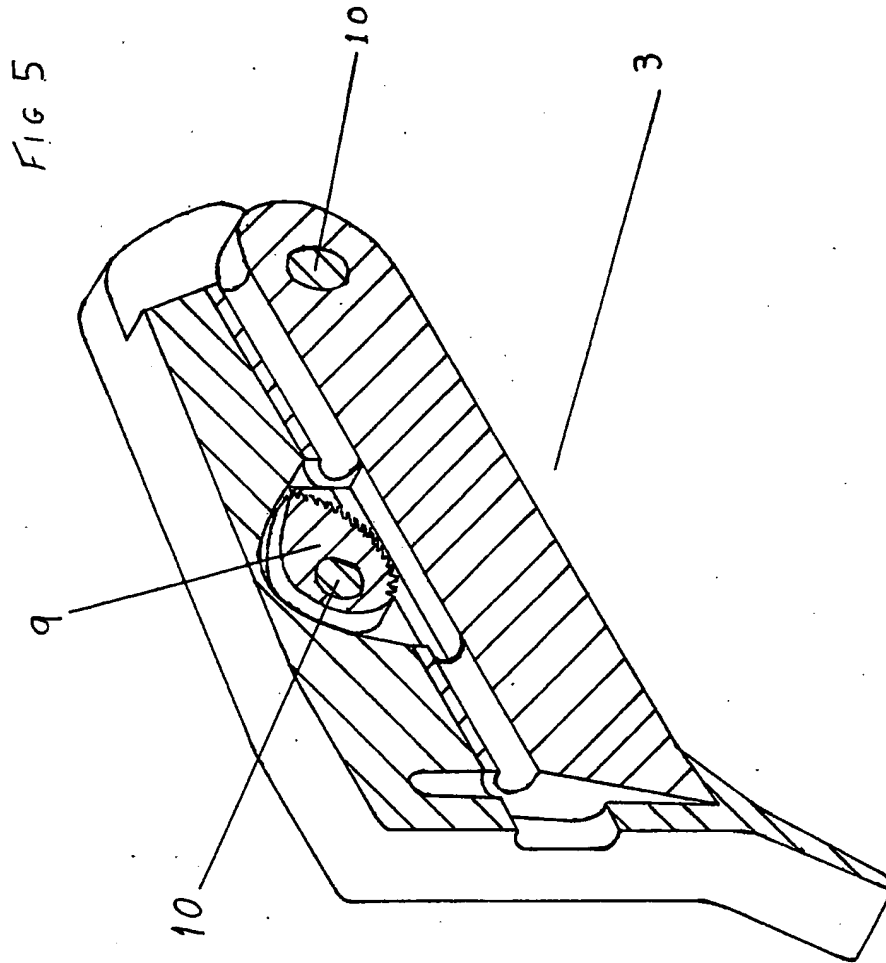


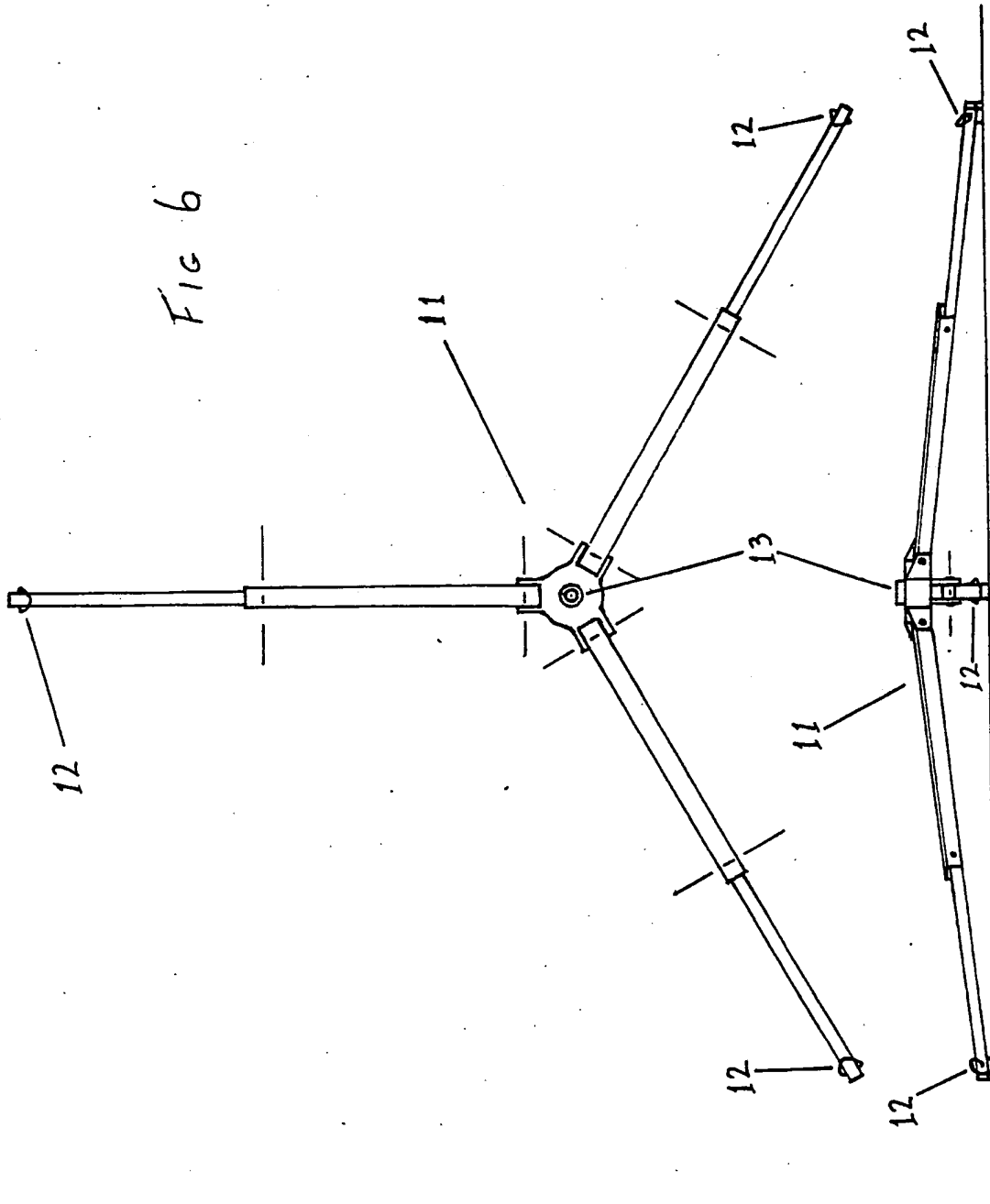
FIG 3



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## Camera Mast

This invention relates to a very lightweight, portable camera support.

In order to achieve high quality photographs under lighting conditions other than bright sunlight, in winds higher than a light breeze or when using a long lens in any conditions, it is necessary to use some form of additional camera support. For decades the almost universal choice for this support has been the folding tripod. It provides in greater or lesser degrees (depending on design) rigidity and portability. However, in order to achieve an acceptable degree of rigidity the tripod has to be of sturdy construction with a minimal number of sections to the legs and is therefore generally rather large, heavy and cumbersome. Some lightweight camera supports are available but all sacrifice rigidity or portability in order to achieve this and in some cases actually aggravate the problems they are intended to solve.

This invention consists of a central supporting column (with ground spike and weight spreading disc) made from a lightweight material and being sectional to allow for mobility and height adjustment. A head capable of accepting a pan and tilt or ball and socket head. Three or more guy lines attaching to the head in such a manner as to allow for individual tensioning. Spring clips or similar attached to the bottom end of the guy lines to allow the use of a variety of ground anchors, e.g. pegs, snow anchors (deadmen), ice screws.

Although primarily intended for use on natural surfaces it could be adapted for artificial surfaces by providing a suitable base arrangement.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawings

in which :-

Figure 1 shows a general arrangement of the camera mast.

Figure 2 shows the method of connecting the column sections.

Figure 3 shows a spring clip attachment.

Figure 4 shows the head viewed from the front and below showing the column and one tensioner in position.

Figure 5 shows, in isometric section, a self locking tensioning device which attaches pivotally to the head.

Figure 6 shows a plan and elevation of a base which would allow artificial surface use.

Referring to the drawings the camera mast comprises a sectional alloy centre column 5 with a detachable ground spike 6 and weight spreading disc 7. A head 1 to which a pan and tilt head 2 may be fitted (by provision of a suitable screw securely anchored) and to which self locking cam action tensioning devices 3 are pivotally mounted using pins or bolts 10. Three nylon cord guy lines 4 pass through the tensioners 3 which when closed clamp the cords 4 by means of cams 9 mounted on pivot pins or bolts 10 and will only allow one way travel of the cords 4. Spring clips 8 are secured to the bottom ends of the guy lines 4 allowing various ground anchors to be fitted.

To allow for artificial surface use where it would be impractical to drive in anchors e.g. concrete, a base 11 could be provided where the column 5 could be securely seated in a socket 13 and the spring clips 8 attached to 'D' rings 12 allowing the whole assembly to be tensioned.

The various components may be varied in size and strength etc



to allow for different weights and sizes of camera etc.

The camera mast is erected by (A) pushing the ground spike 6 through the disc 7 into the ground, after selecting and joining the appropriate column sections for the required height, ensuring that the column 5 is at approximately the angle desired. Or (B) fitting the column 5 into the socket 13 in the centre of the base 11. Once the column 5 is erected as in either (A) or (B) the head 1 complete with tensioners 3 and guy lines 4 is fitted. The tensioners 3 are then released and the guy lines extended as required and attached to either the chosen ground anchors or the base 'D' rings 12 using the spring clips 8. The ground anchors are then secured (if applicable). The tensioners are now closed and the guy lines tensioned as required by pulling downwards on the free ends until the head is secured in the desired position.

Claims

1 A lightweight camera support comprising a centre column, a head capable of accepting a pan and tilt or ball and socket head and supported by three or more tensionable guy lines to which a variety of ground anchors may be fitted.

2 A lightweight camera support as claimed in claim 1 wherein the centre column is sectional to allow for portability and height adjustment.

3 A lightweight camera support as claimed in claim 1 or 2 wherein the guy lines are tensioned by devices pivotally mounted to the head.

4 A lightweight camera support as claimed in claims 1, 2 or 3 wherein a base is provided to allow for artificial surface use.

5 A lightweight camera support substantially as described herein with reference to figures 1 - 6 of the accompanying drawings.

Amendments to the claims  
have been filed as follows

Claims

1 A lightweight camera support comprising a sectional centre column, a head capable of accepting a pan and tilt or ball and socket head and supported by three or more independently tensionable and length adjustable guy lines to which a variety of ground anchors may be fitted.

2 A lightweight camera support as claimed in claim 1 wherein the guy lines are tensioned and length adjusted by devices pivotally mounted to the head.

3 A lightweight camera support substantially as described herein with reference to figures 1 - 6 of the accompanying drawings.